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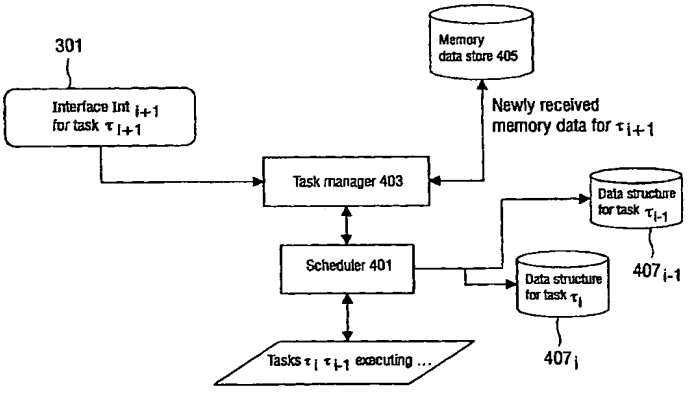
(54) Title: RESOURCE MANAGEMENT METHOD AND APPARATUS



(57) **Abstract:** This invention is concerned with apparatus and a method for resource management and is particularly suited to resource management of real-time systems. In particular, the invention is concerned with memory management of applications running on low cost systems where the amount of main memory is limited. The invention provides a method of scheduling a plurality of tasks in a data processing system, each task having suspension data specifying suspension of the task based on memory usage associated therewith, the method including: processing one of the plurality of tasks; monitoring for an input indicative of memory usage of the task matching the suspension data associated with the task; suspending processing of said task on the basis of said monitored input; and processing a different one of the plurality. Thus in the invention, tasks to be executed on such a system are preconfigured with suspension data, otherwise referred to as memory-based preemption points, which specify the amounts of memory required at various points in a task's execution (i.e. at and between preemption points). The data processing system is equipped with corresponding processing means arranged to evaluate whether, on the basis of the task(s) to be processed and the available memory, scheduling of the tasks should be constrained. The invention thus provides a means of preempting task processing based on memory constraints, and as such provides both a new memory management method and a new preemptive criterion.

WO 2004/090720 A2

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